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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,393	08/15/2006	Henri Rainer Nordlund	3516-1010	6414

466 7590 12/28/2009  
YOUNG & THOMPSON  
209 Madison Street  
Suite 500  
Alexandria, VA 22314

EXAMINER
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MONSHIPOURI, MARYAM

ART UNIT	PAPER NUMBER
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1656

NOTIFICATION DATE	DELIVERY MODE
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12/28/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DocketingDept@young-thompson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,393	<b>Applicant(s)</b> NORDLUND ET AL.	
	<b>Examiner</b> Maryam Monshipouri	<b>Art Unit</b> 1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 47-67 is/are pending in the application.
- 4a) Of the above claim(s) 53-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 47-52, 56-67 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

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Applicant's response to restriction of 10/2/09 is acknowledged. Applicant elected Group I, claims 47-52 and 56-67 and Group (h), with traverse. Claims 53-55 and all groups (a)-(g) and (i) to (j) are withdrawn as drawn to non-elected invention.

Claims 1-46 are canceled.

In traverse of restriction requirement applicant argues that even though all the avidin monomers disclosed in the specification (including wild type avidin, poultry avidin, streptavidin and chicken avidin related protein, AVR or mutants thereof) differ in their amino acid composition they remain structurally related at the secondary, tertiary and quaternary levels and all retain biotin binding activity and this defines at least one technical relationship between Groups I-II. Therefore, in view of applicant, the subject matter possesses unity of invention and restriction should be withdrawn.

This argument was fully considered but was found **unpersuasive**. It should be noted that firstly, relatedness and similarity are ambiguous terms. Applicant is well aware that the fact that said polypeptides remotely relate to one another at macro scale and "in vitro" bind biotin does not justify withdrawal of restriction. After all, the fact that nature has produced many variants of said polypeptides, namely wild type avidin, poultry avidin, streptavidin and chicken avidin related protein, AVR etc. implies that the exact "in vivo" function of said products are different; and function difference implies structural difference. Secondly, for arguments' sake, 30% amino acid identity between amino acid sequence of avidin and streptavidin, as admitted by applicant, is barely sufficient to convince the skilled artisan that said proteins are even related.

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Therefore, the examiner respectfully disagrees that all inventions claimed possess unity of invention and should be rejoined.

In conclusion, for the response provided above in addition to those provided previously the restriction remains and is hereby made **Final**.

In view of applicant's cancellation of all original claims and filing of new claims further restriction deemed necessary as following:

**Group I(A):** dual chain wild type avidin, dual chain wild type pseudo-tetrameric avidin, DNA encoding said products and methods of expressing said DNA.

**Group I(B):** dual chain streptavidin, dual chain wild type pseudo-tetrameric streptavidin, DNA encoding said products and methods of expressing said DNA.

**Group I(C):** dual chain poultry avidin, dual chain wild type pseudo-tetrameric poultry avidin, DNA encoding said products and methods of expressing said DNA.

**Group I(D):** dual chain AVR, dual chain wild type pseudo-tetrameric AVR, DNA encoding said products and methods of expressing said DNA.

The inventions listed as Groups I(A)-I(D) do not relate to a single general inventive concept under PCT Rule 13.1 because under PCT Rule 13.2, they lack the same or corresponding technical features for the following reason: The special technical features of Groups IA-ID are wild type avidin, streptavidin, poultry avidin and AVR respectively, which are each directed to products of unrelated chemical structure and function which barely have anything in common.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of an invention to be examined even though the requirement may

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be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maryam Monshipouri whose telephone number is (571) 272-0932. The examiner can normally be reached on Tues.-Fri., from 7:00 a.m to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571) 272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Maryam Monshipouri/  
Primary Examiner, Art Unit 1656

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